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Knowledge and Perceptions Regarding Nicotine Replacement Therapy among Dental Students in Karnataka

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Abstract:

Background: Organized dentistry has recognized the role of oral health professionals in discouraging tobacco use. Unexplored level of knowledge regarding the benefits and prescription of nicotine replacement therapy (NRT) have aroused interest among us which initiated us to assess the knowledge and perception of dental students toward NRT among various dental colleges in Karnataka, South India.

Materials and Methods: A questionnaire survey was done among 16 selected colleges in Karnataka. It was distributed for 3rd year, final year, and interns. The study group provided answers to 14 item close-ended questionnaire. The first dimension obtained information on sex, age, course and year of study, and other dimension on forms in which NRT's are supplied, effectiveness of NRT's, side effects of NRT's, rate of success of NRT's, electronic cigars, and recommendations of NRT's. Statistical analysis was done using frequency distribution of responses.

Results: A total of 1984 undergraduate students from Dental Colleges in Karnataka responded to the questionnaire. Most of the students were unaware about NRT term and its forms. Most of the students were aware about the effectiveness of NRT's (54%) for the rescue of the smokers to quit and felt transdermal patch (42%) could be the most effective way for smokers to quit followed by chewing gums, respectively.

More than half of the respondents (53.5%) were unaware of E-cigar's and also felt that NRT's and Counseling cumulatively can contribute for cessation of the tobacco habit.

Conclusion: A large proportion of dental students in this part of the country were unaware about NRT.

Key Words: Dental students, knowledge, nicotine replacement therapy

Introduction

Tobacco smoking takes away not just your health but wealth. It is estimated that 5-15% of a smoker's disposable income is spent on tobacco, which could be an enormous economic burden on you and your family.

Tobacco use causes an acknowledgeable amount of suffering for families and individuals associating with smokers. This suffering manifests itself in the form of diminished quality of life, death, and financial burden. Smoking affects social interaction and relationships negatively.

Many smokers are afraid to quit because they have tried to quit in the past and were unsuccessful. They think it will be too hard because they do not believe they can overcome withdrawal symptoms, they feel like they have no support or just do not think they are capable of success.¹

Organized dentistry has recognized the role of oral health professionals in discouraging tobacco use. Patients expect and are comfortable with receiving dental advice to quit tobacco use. Interaction with the dentist, a respected health care provider has a powerful influence and can be tailored to individual patient interests, conditions, and culture. Tobacco prevention and control are important because reducing tobacco use is essential in improving quality of life, preventing and treating many oral diseases.²

Dental clinic serves as ideal setting for tobacco cessation services as preventive treatment services, full mouth screening, and patient education always have been a largest integral part of the dental practice. Repeated follow-ups and a longer duration of contact during each time with special preference individually can be easily provided in dental practice than in many medical care environments.

In conjunction to behavioral therapies, there are also pharmacological therapies available which can overcome nicotine withdrawal symptoms. The two major types of medication available that may be able to relieve withdrawal symptoms are: Nicotine replacement therapies (NRTs) and non-NRT. NRTs include things such as nicotine gum and patch.

Dental professionals are so placed that during the consultation it can provide an opportunity to point out the detrimental effects of tobacco use on oral and general health. Previous studies on tobacco cessation in dental clinics indicated that there was strong correlation between oral lesions and directly relating them to the patient's tobacco use, which can be considered as a powerful motivating factor for the initiation of a cessation attempt.

Dentists are placed uniquely in such a position that they will deliver specific, authoritative information concerned with the adverse oral effects of tobacco use as they render frequent dental services to adult and adolescent smokers.

Previous studies have reported dentists were not certain in suggesting NRT. Their unexplored level of knowledge regarding the use and prescription of NRT have aroused interest among us which initiated us to ascertain level of knowledge regarding NRT's among dental students in selected dental colleges among Karnataka, South India.

Materials and Methods

The study was conducted in October-December 2014 in dental colleges in Karnataka, India.

The ethical approval for the study was obtained from the Institutional Ethical Board.

16 Colleges were selected out of total 46 dental colleges in Karnataka by computer generated random sampling. The questionnaire was completed by 3rd year, final year undergraduates and internees who were present on that day.

The total number of dental undergraduates was 2240 of which 1984 were present on the day of the survey. The study group provided answers to 14 item close-ended questionnaire that was grouped into two parts. The first dimension obtained information on sex, age, course, and year of study. The second dimension obtained information on forms in which NRT's are supplied, effectiveness of NRT's, side effects of NRT's, rate of success of NRT's, electronic cigars, (E-cigars) and recommendations of NRT's. The internal reliability (Cronbach's alpha) of the questionnaire was tested in a pilot study done before the final study, and it was found to be acceptable (0.62). Statistical analysis was done using frequency distribution of responses. (SPSS version 11.5).

Results

In total, this study analyzed data for 1984 undergraduate students from Dental Colleges in Karnataka State. About 95% more of all dental students were younger than 30 years old. The proportion of female dental students was almost 76% compared with males (Table 1).

Almost 63% of the students were aware about NRT term. Most of the students (46%) were aware about the NRT forms

(patch gums, lozenges, nasal spray, tablets). Approximately, 54% of the students were aware about the effectiveness of NRT's for the rescue of the smokers to quit. Most of the respondents (42%) felt transdermal patch could be the most effective way for smokers to quit followed by chewing gums, respectively (Table 2).

Almost 54% of the respondents felt that usage of NRT's can lead to side effects and about 40% of the respondents felt the need of tapering the dosage of NRT's.

Regarding the rate of success most of the respondents (52.5%) felt that NRT's and Counseling cumulatively can contribute for cessation of the tobacco habit. More than half of the respondents (53.5%) were unaware of E-cigar's and among them who knew most of them were unaware that E-cigar can help the individual with strong dependence who failed to quit smoking with the aid of NRT. Most of the respondents (56%) were uncertain about prescribing NRT's for pregnant mothers and also felt that NRT's are not recommended for occasional smokers. On the end, more than 3/4th of the respondents (84%) felt that NRT's should be included in the present academic curriculum (Table 2).

Discussion

Health professionals have a pivotal role in the cessation of tobacco. Clinicians can induce a major difference even with a minimal intervention and also there would be an association, which exists between the intensity of intervention and outcome of tobacco cessation. Even when patients' exhibits negative attitude toward a quit attempt, doctor-administered brief interventions compliment motivation and enhance the likelihood of impending quit venture.

Tobacco users are being centered to consider quitting by a wide range of societal and environmental factors. NRT is found to be an effective remedy to decrease cravings related with smoking cessation. As observed with cigarettes the methods used in this therapy will not produce the same peak levels of nicotine in the blood, hence do not cause the same subjective effects. However, they curb nicotine withdrawal symptoms. Smokers can now change their addictedness to a substitute nicotine

Table 1: Frequency distribution of respondents according to gender, age, and year of studying.

Socio-demographic characteristics	N (%)
Gender	
Males	477 (24)
Females	1507 (76)
Age	
<30 years	1885 (95)
>30 years	99 (5)
Year of studying	
3 rd year	418 (21)
4 th year	674 (34)
Internship	892 (45)

Table 2: Responses of the respondents to the questions related to NRT.

Questions	N (%)
Q1. Have you heard about the term NRT?	
(a) Yes	1243 (62.7)
(b) No	741 (37.3)
Q2. Currently, what all forms of NRT's are available?	
(a) Patch gums, lozenges	341 (17.2)
(b) Inhalator, nasal spray, tablets	141 (7.1)
(c) Both a and b	902 (45.5)
(d) Don't know	601 (30.3)
Q3. Do you think NRT's are effective enough to help smokers quit?	
(a) Yes	1041 (53.5)
(b) No	381 (19.2)
(c) Don't know	562 (28.3)
Q4. Do you know what all forms NRT's are supplied?	
(a) Yes	702 (35.4)
(b) No	481 (25.2)
(c) Don't know	801 (40.2)
Q5. Which among these do you think is the most effective way for smokers to quit?	
(a) Chewing gums	582 (29.3)
(b) Transdermal patch	842 (42.4)
(c) Nasal spray	140 (7.1)
(d) Don't know	420 (21.2)
Q6. Do you think NRT's like chewing gums and transdermal patch lead to side-effects?	
(a) Yes	1062 (53.5)
(b) No	321 (16.2)
(c) Don't know	601 (30.3)
Q7. Do you think tapering of NRT's is needed?	
(a) Yes	801 (40.4)
(b) No	321 (16.2)
(c) Don't know	862 (43.4)
Q8. Adhesive transdermal patches can be applied to	
(a) Trunk	140 (7.1)
(b) Upper arm	361 (18.2)
(c) Both	800 (40.4)
(d) Don't know	674 (34.3)
Q9. Which among the following do you think has a higher rate to success?	
(a) NRT'S	341 (17.2)
(b) Counseling	441 (22.2)
(c) Both	1041 (52.5)
(d) Don't know	161 (8.1)
Q10. Have you heard about E-cigar's?	
(a) Yes	932 (46.5)
(b) No	1052 (53.5)
Q11. Do you think E-cigar might help individual with strong dependence who failed to quit smoking with the aid of NRT's?	
(a) Yes	912 (45.5)
(b) No	220 (11.1)
(c) Don't know	862 (43.4)
Q12. Are NRT's recommended for occasional smokers?	
(a) Yes	321 (16.2)
(b) No	1052 (53.5)
(c) Don't know	611 (30.3)
Q13. Do you think the study of NRT's should be included in the present academic curriculum?	
(a) Yes	1662 (83.8)
(b) No	322 (16.2)
Q14. Pregnant smokers can be given NRT's	
(a) Yes	220 (11.1)
(b) No	660 (33.3)
(c) Don't know	1104 (55.6)

E-cigar's: Electronic cigars, NRT: Nicotine replacement therapy

delivery system, which can be gently dropped out. Tobacco smoking takes away not just your health but wealth. It is estimated that 5-15% of a smoker's disposable income is spent on tobacco, which could be an enormous economic burden on you and your family.¹ Because of the better accessibility than other health care professionals to healthy tobacco users seeking routine dental care, dentists are positioned uniquely and advantageously to offer cessation counseling and also the have direct professional interest in tobacco due to its harmful effects on the oral cavity.³

In the present study, we found almost 3/4th of the participants were unaware of NRT term. The reason might be non-inclusion of NRT in their curriculum. Most of the students in our study reported they had heard about NRT term, but when more questions were asked in detail most of them failed to answer, especially regarding forms of NRT's where almost 1/4th of the students were unaware. Their insufficient knowledge regarding the prescription of NRT could be succeeded by having pharmacists at the dental colleges and train students about tobacco cessation medications, and provide instructions regarding these medications. If the students are taught about the NRT medications, they will feel more confident in prescribing these medications to their patients willing to quit.³

Significant gender differences were noticed with respect to only questions related to E-cigars, forms of NRT in which males response rate was better than females. Although, respondents were not ascertained with a habit of smoking, the reason probably might be smoking male students might have come across E-cigars when they might wanted to quit.

Although nicotine patches and gums available in Indian market, almost 1/4th of respondents were unaware.

Dentists do not often recommend NRT for people <18, largely since they are tested only on adults.⁴

Since all NRT's found to equally effective, many smokers choose a regimen according to ease of use keeping into consideration about what possible side-effects it may cause. It is also found that each and every form of NRT's has adverse effects, but the types of adverse consequences differ across various NRTs. In the present study, almost half of respondents are well known about the adverse effects of NRT.

Nicotine patches can be stopped abruptly or gradually can taper the dose of nicotine According to literature there was no evidence that tapered therapy was better than abrupt withdrawal, but most of our respondents were unaware of the same.

Regarding the safety of NRT's during gestation, before the NRT's are suggested, most doctors will suggest that you try alternate ways to stop. In our study, more than half of the respondents were unsure about the same.⁵

Undoubtedly, we can infer that the transition from student to junior doctor is immense hop with regard to responsibility. The procedures and skills, which are learnt in counterfeit environments are being succeeded for actual, and more often under pressure of time and with huge workloads.⁶

It is important to reinforce peer educators complete tobacco training, before big events like collegiate smoke out. It is also vital to link with nurses from the health center or campus counselors to ascertain about nearby resources, and also hold a competition between residence hall groups to find out who can perform the most complete assessment of cessation options.

Conclusion

A large proportion of dental students in this part of the country were unaware about NRT. Professional training programs for graduates and undergraduates are required to increase the knowledge, understanding and practices that foster prescriptions of various agents of NRT's. Universities and dental colleges charged with the responsibilities of preparing personnel must include Tobacco cessation counseling and NRT as a component of the curriculum. Contemporary and

comprehensive efforts are needed to train dental students on tobacco cessation techniques.

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